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THE HOUSING PROBLEM

A SUMMARY OF CONDITIONS AND REMEDIES

PREPARED TO ACCOMPANY THE
HOUSING EXHIBIT IN MAY, 1911

OF THE

HARVARD SOCIAL MUSEUM

BY

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THE HOUSING PROBLEM

A SUMMARY OF CONDITIONS AND REMEDIES PREPARED
TO ACCOMPANY A HOUSING EXHIBIT OF THE
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RECENT housing surveys, especially in English and American cities, have disclosed conditions of living needlessly bad. The dwelling-places in which men spend at the least their eating and sleeping hours, in which women and children spend often half and sometimes all of their time, are for millions of people congested, dark, ill-ventilated, unsanitary, combustible, ugly.

CONGESTION AND HEALTH

Congestion is currently defined as of two types: (1) the overcrowding of buildings upon a given land area, and (2) the overcrowding of individuals within rooms. Land congestion limits the circulation of air and the penetration of light and sunshine to apartments, especially of the lower floors, and increases the probability of spread of fire. Room congestion reduces the supply of fresh air available to tenants and often renders privacy impossible, thus creating an environment favorable to immorality at moments when inhibition is weak.

Health dangers growing out of unimproved dwelling conditions are:—

(1) The easy spread of all contagious diseases where many individuals daily make use of common entrances, halls, toilet conveniences, and water supply.

(2) The especial liability to tuberculosis where buildings are so constructed that sunlight does not have access to every room, where ventilation is poor.

(3) The increased likelihood of infection from typhoid fever where toilet conveniences are shared by many or are improperly flushed; where refuse and filth remain uncovered and accessible

to disease-carrying insects or animals; where surface drains and polluted brooks or rivers abut on dwellings; where out-houses, stables, or cesspools are close by streams, hydrants, or wells.

(4) The moral contagion, chiefly, but not exclusively, operative upon the adolescent boy and girl, where in congested districts the social vices are easily discovered by the inquisitive, and may become matters of current morbid discussion or of experience.

DIVERSITY IN LOCAL HOUSING PROBLEMS

Housing conditions vary widely from city to city, and from nation to nation. In America, for example, tenement houses are largely built of combustible material, creating a greater fire risk than is common in European cities. New York, Boston, and many French and German cities contain block dwellings many stories in height, thus rendering acute the problems of light and ventilation. Philadelphia, Chicago, Milwaukee, London, and Birmingham have comparatively few tall tenement houses, but suffer from bad repair or from room congestion. New York City has the air-shaft as a typical problem. Other municipalities have been cursed with the back-to-back tenement. In Glasgow and Berlin the one-room tenement is still frequent. Philadelphia, Baltimore, and Pittsburgh have been deficient in public water and sewage systems and have been forced to deal with yard hydrants, surface drains, and yard privies. The materials available for use in house building also vary from locality to locality. Materials of varying fire and weather resisting qualities are used — wood in America and New Zealand, brick in America and England, limestone in France — each affecting the security of the occupant in a different way. Land configuration, land values, racial traditions, and imitative architecture also interplay in the production of characteristic local problems.

CAUSES OF BAD HOUSING CONDITIONS

The social causes of evil housing conditions may be traced not only to the cupidity, apathy, or ignorance of landlord or of builder, but also to the lack of adequate social control of land and buildings. Under modern conditions the speculator may buy cheap land and hold it unbuilt upon for a rise in value, or he may erect

unsafe houses and demand whatever rent competition will allow. As immigrants and the rural classes swarm to the cities, business and industry grow and encroach on the dwellings of the well-to-do. The wealthier classes move farther from the business centre and their homes, erected for single families, are made over and filled by many families of the working class. Immigrants of each race gather their own kind about them. Open space is utilized for further building; more families join the group; and land values, due to presence of large population and the money-earning potential of the land, rise. Tenants' rents in turn are raised in so far as the conditions of the market will allow. The number of rooms rented to a family is diminished, or lodgers are taken, until each city or town may boast a congested Italian, Jewish, or other immigrant quarter, an "Acre," a "Ghetto," a "Little Italy." The supply of desirable dwellings is so small that the majority of population are forced to content themselves as tenants to the property owner with unsatisfactory and even dangerous conditions. The fluctuating demands of industry and the monopoly of land render the erection and ownership of homes impracticable to the majority of men. Thus a variety of social facts, the unrestricted private ownership of land, the uneven distribution of wealth, the influx of rural population to cities, immigration from foreign lands, racial and class gregariousness, the greed of landlords and builders, ignorance and low standards, the lack of social foresight, all interplay in the production of haphazard inconvenient and ugly cities, and of congested slums.

THE HOUSING PROBLEM AND THE SUGGESTED REMEDIES

The housing problem is concerned with the question: How may society best provide that each individual family unit may have a home that shall be self-contained, private, sanitary, open in every room to sunlight and fresh air, safe from fire and collapse, and yet at a rent consistent with income, — a house that shall be artistic and hygienic, a home environment which shall be, if not actually constructive, at least not destructive either of body or character, and at a rent no higher than is paid for the slum tenement of today? How may each family have a dwelling pro-

vided with every requisite upon which modern science is agreed ? The suggested solutions for this, as for every, social problem cover a wide range from specific, concrete, local remedies to sweeping social reconstruction, in which the housing solution plays only a minor part. Aside from general and less tangible remedies, indicated by the terms "education," "industrial partnership," "good government," "socialism," there remain many measures of existing social practice, the efficacy of which may be tested.

Alleviative or essentially curative measures take the form of repair and management of slum dwellings: remodelling old buildings, cutting new windows, clearing yards and courts, cleansing, whitewashing, disinfecting, replacing defective water and toilet facilities with approved plumbing. Private enterprise may insure proper usage of old or remodelled tenements through the establishment of rules for tenants, inviting care of their homes and the common premises, especially by means of remission of a portion of rent for prompt payments, long tenure, and infrequent repairs; through the appointment of women rent collectors, who may serve the tenants in sympathetic advisory capacity, especially in matters relating to house-keeping; through the provision of instructed janitors or caretakers. Public action adds to this programme general sewage systems, the collection and disposal of garbage and wastes, inspection of buildings by competent officials, and the enforced alteration, vacating, or demolition of unsanitary buildings. The administration of fire and police departments, prisons, hospitals, and asylums is probably in part evidence of the limited efficacy of these measures in actual social practice.

Measures chiefly preventive in character are concerned with the future dwellings of the city and include experiments aiming at the discovery of the cheapest forms of durable and artistic construction, the erection either by private or public capital of "model" dwellings; legislation governing the structure of buildings to be erected, the height, arrangement, materials, fireproofing, size of rooms, courts, yards; city-planning provisions determining the location of residence sections, types of buildings to be erected in different quarters, the area of land to remain uncovered, the width and direction of streets, the reservation of segregated

areas for factories, the reservation of parks and of other land for future city needs; movements for the distribution of present and future city population to suburbs or the redistribution of population and urban manufactures to industrial villages.

To the preventive programme may be added schemes for the taxation of the economic rent or "unearned increment" of land, designed to appropriate for society the enhanced values of land which the presence of population creates, thus minimizing land speculation. Aside from its fiscal value, the social appropriation of the economic rent of land is urged on the grounds that it would serve to throw idle lands into use, to stimulate building, and thus to increase the number of available tenements and to decrease congestion. The rents to be paid by tenants are expected to fall to the lowest point consistent with a fair lessor's profit because of the increased competition of landlords; public funds disposable for general improvements will be augmented by the land tax.

There remain the programmes of land nationalization and of socialism; the former involving much the same ends as the tax upon the economic rent of land, but by means of public operation; the latter involving public ownership and operation of all industry as well, hence controlling the location, erection, and management of both factories and houses.

PRIVATE ALLEVIATION OF HOUSING CONDITIONS

Housing conditions within modern speculatively built towns can be materially alleviated either by public or by private effort, especially by means of inspection, repair or demolition of houses, and by education of tenants. Philanthropic societies have often organized to purchase or manage unsanitary areas. A notable American example is the Octavia Hill Association of Philadelphia, copied, with some necessary local modification, after the method of Miss Hill in London. The work of the Association consists in purchasing and repairing small unsanitary dwellings in the poorest quarters of the city, and in acting as agent for owners of slum property, receiving a commission of $7\frac{1}{2}$ per cent on the rents collected. The Association employs women rent collectors who instruct the tenants in cleanliness, in housekeeping, and other

matters, aiming thus to raise their standards of living. At the end of the year 1910 the Association owned 83 houses, value \$109,500, and managed 186 other houses, dealing with over 500 families. The Association has been able to pay 4 per cent dividends on invested capital and has accumulated a small reserve fund, demonstrating "the possibility of overcoming bad conditions, and yet receiving a fair financial return."¹

LEGISLATION, INSPECTION, AND REPAIR

Public action, to render the existing slum less dangerous to physical and moral health, begins in "health acts," the provision of public water supply, public sewage systems, and the regular collection of refuse. Modern cities or states usually go further and frame health laws, governing the minimum sanitary conditions of existing dwellings. In America the inspection under these laws ordinarily falls as an additional task to existing health or police departments. New York City, stimulated to action by the most appalling conditions of congestion to be found in America, — due largely to peculiar land formation, — has passed a tenement house law unexcelled in its thoroughness, and has created an official Tenement House Department concerned with the exclusive problem of housing. This Board, though still inadequately equipped with inspectors of old tenements, has in the years 1902–08 received and investigated 275,000 complaints. It has caused 2290 rooms to be vacated, 39,000 windows to be cut in dark rooms, 3,700 school sinks and 2300 privies and cesspools to be removed, 26,700 water closets to be provided and 358,000 to be cleaned and repaired. The Board has required the building of 55,700 new fire-escapes, and has ordered improved fire protection in more than 180,000 other instances. Other forms of cleaning or repair have been effected in over 500,000 cases.²

¹ Annual reports and leaflets of the Octavia Hill Association, Philadelphia, Pa.

² Fourth report of the Tenement House Department of the City of New York, pp. 262–265.

DEMOLITION OF SLUMS

In Great Britain the reports made by Government officials on large unsanitary areas have in many instances resulted in the razing of districts, several acres in extent, under the direction and at the expense of the municipality. On some occasions the areas thus demolished have been left open and developed as public parks. An American instance of the same practice is that of Mulberry Bend in New York, a notorious district of 2 $\frac{3}{4}$ acres, which in 1895-96 was torn down and made over into a municipal park. In other instances only obstructive buildings have been removed; remaining structures being repaired for further use. Examples of this practice in Boston, Massachusetts, and in Birmingham, England, show the possibilities of vast improvement in sanitation and in amount of air and sunlight rendered accessible to tenement dwellers, with comparatively slight public expense.

PUBLIC REBUILDING OF DEMOLISHED AREAS

Another method, more sweeping in its nature and characteristic especially of British cities, is the demolition of slums and the erection by the municipality of new buildings on the same land to rehouse the displaced population or its equivalent. Thus the London County Council in 1891 spent \$1,600,000 in the purchase of fifteen acres of land in the vicinity of Boundary Street, Bethnal Green. On this territory 5719 individuals were found to be crowded, at an average of 2 $\frac{1}{2}$ persons per room, under conditions dangerous to health and public safety. The area was torn down and new model tenements were erected at a cost of over \$1,460,000 providing for 5380 persons.¹ Many schemes of this sort have been carried out by London, Liverpool, Glasgow, and other British cities. This method, however, has been found very expensive and not altogether satisfactory. The displaced population merely increases district congestion at the time of dislodgment and does not in large proportion return to the new dwellings when finished. A further difficulty with this system lies in that a

¹ London County Council, "The housing question in London," 1855-1900, pp. 190-213.

class of unscrupulous private landlords is fostered by it, men who purposely hold unhealthy areas unrepaired, hoping to sell at a premium to the city. It has further proved difficult, on slum land where values are high, for municipalities to build accommodations of a type that will provide all the requisites of good housing, and yet house all of the once overcrowded population of the area at current rents. Housing on demolished slum areas, therefore, means either providing for a different and wealthier class than the former occupants, or else means an annual deficit to be paid out of taxes.

Measures for slum demolition and repair, as well as for the education of tenants, although essential as temporary means to the alleviation of the most flagrant housing evils, are not in themselves sufficient solutions of the housing problem. For on urban lands it is only by the maintenance of crowding of buildings and of tenants that landlords can secure even a low commercial profit from the low rents that the poorest classes can afford; and crowding, even though it be of model tenants within sanitary urban tenements cannot but result in inadequate air, sunlight, and privacy.

PREVENTIVE LEGISLATION

If, in addition to the above measures, a careful tenement house law is enacted and enforced, requiring a high minimum of provisions for health and safety in all existing buildings, and demanding that all new tenements to be erected shall leave open a large percentage of the building lot, that every room shall have windows facing upon a street, a wide court or yard, that fireproof materials be used where necessary in construction, that water and toilet facilities be private and sanitary, — if such a law is enforced, every tenement house will in accordance with the strictness of the law be a model tenement house, and the law may constantly be rendered more stringent as the leadership of housing experts and the assent of public opinion may determine. Thus housing legislation lends itself to broad usage co-extensive with the whole field of urban life and growth.

TYPES OF IMPROVED DWELLINGS

Ahead of the mass ruling of housing legislation lies the pioneer work of public and private philanthropy in the building of model dwellings or estates. Types of dwellings may conveniently be designated as: (1) tenement houses; (2) lodging houses; (3) cottage flats; (4) cottages. Tenement houses may be roughly defined as buildings occupied as the home of three or more families living independently of each other and doing their cooking on the premises. In Great Britain tenement houses of four or more stories in height are usually termed "block dwellings." Lodging houses are buildings designed to shelter single men or women. Cottage flats are two-story buildings, housing one family on each floor; private stairways and often separate balconies or gardens are provided for each flat. Cottages are small self-contained houses, usually with a front yard or a garden, and occupied by only one family. Each of these types may be single, double, or multiple in form, the number of entrances being the standard of distinction. In general, the tenement and the lodging house are urban types of dwelling; the cottage flat and cottage in single and multiple forms prevail in suburbs and rural districts.

The model tenement and lodging house, when wisely planned to exemplify the best in hygiene, beauty, and cheapness that contemporary science can construct, may offer a standard more or less satisfactory toward which urban housing legislation may tend. The erection of such dwellings by municipalities or by private organizations conducted on business principles, is consistent with profit upon the invested capital.

MUNICIPAL HOUSING

Municipal housing has often been conducted without intention of profit-taking. The rebuilding of slum areas, already mentioned, and the provision, as in the case of Liverpool, of tenements for the poorest types of casual laborers are examples of this method. The inefficiency which frequently characterizes municipal business has similarly often prevented commercial success in municipal housing. Loose methods of municipal bookkeeping which fail to charge to the housing account the original cost of the land, or taxes, or certain

legitimate items of management, render knowledge of the exact business nature of these ventures difficult to obtain. Certain housing investments of British and German cities have, however, been conducted without loss, especially where dwellings have been erected on suburban lands, or where the tenants have been moderately well-to-do workingmen.

PHILANTHROPIC HOUSING

The erection of "model dwellings" by private agencies has also frequently proved that philanthropy is consistent with moderate profit. The historic American examples of this principle are the Tower and Riverside Buildings, built in Brooklyn by Alfred T. White, in 1878 and 1890. An annual profit of five per cent is still made on this investment. The City and Suburban Homes Company of New York City owns \$5,000,000 of tenement and \$780,000 of cottage property. This Company declared a dividend of four per cent for the year 1909. The Boston Co-operative Building Company continually pays dividends of 5 per cent on an investment of \$292,000 and has accumulated a surplus of over \$90,000. Model lodging houses also prove a paying form of philanthropic investment. The six Rowton Houses of London, which provide beds for 5161, pay dividends of 4 per cent. Two of the Mills Hotels of New York City pay 4 per cent. The Algergo Popolare of Milan pays 5 per cent.¹

TENEMENT VERSUS COTTAGE

Municipal and private provision of tenements within cities as a cure for slum conditions is largely limited by the expense and other difficulties, which are great as contrasted with the real good achieved. Slum land is inevitably expensive, due to its proximity to commerce and industry as well as to the presence of population. The payment of the interest and the amortisation of the capital invested in such land is therefore high and places a heavy drain upon the expenses of the building company. The construction of tenement houses, that are sanitary and fireproof, is similarly expensive. These high costs of land and of construction must

¹ Unless otherwise stated, all figures quoted are taken direct from the reports of the institutions in question.

usually lead either to reduction in size of accommodation, inconsistent with the "model" character of the undertaking, or must result in rents higher than the poorest workingman can pay. Otherwise no dividend will be earned upon the invested capital. The result of these facts is, therefore, a tendency, especially noticeable in England, but already observed in America, for the social emphasis upon the erection of model urban buildings to subside, and for broader aims to take the place of restricted local palliation. The modern British housing reformer seeks rather to effect a redistribution of population with public control of land values, and the housing of each family in a separate cottage instead of the city tenement. The tenement that was once termed "model" has been condemned, not only as costly, but as ugly, sunless, confined, or over-gregarious. The cottage is extolled as cheap, artistic, spacious, healthful, private, and conducive, especially through the garden which usually accompanies it, to natural modes of living. Public control of unsanitary tenements and private care for the inmates must remain as long as any slum population is left within the city. But the field of construction of homes for the slum dweller has been transferred from the city to the cheap land of the suburb or industrial community. This has been rendered possible by the recent increase in swiftness and cheapness of urban transit facilities, by conscious planning on the part of city governments to provide for future growth, by migration of factories from city to suburbs or villages, and by the co-operative and private settlements termed "garden cities, garden suburbs, and garden villages."

PRIVATE ENTERPRISE AND SUBURBAN HOUSING

Experiments in suburban housing have already been made by the City and Suburban Homes Company of New York, which in 1897 began the erection of a cottage settlement at Homewood, Long Island. Individual cottages were erected at a cost of \$2000—\$5000, and sold to tenants on instalments covering twenty years. In this way monthly payment toward the acquisition of the house did not exceed the rent that is paid for a good city tenement of four or five rooms. A provision in the agreement between the Company and the tenant required the tenant to take life insurance

to two-thirds the amount of the mortgage upon his house; arrangement is made for the payment of insurance premiums with the rent. Thus, in case of the death of the head of a family the house is sure to remain with the widow without mortgage. Another experiment of similar type is now being made at Forest Hills, Long Island, under the direction of the Russell Sage Foundation. The project provides a well-planned suburban community, but will house only people of moderate income, not the very poor.

Commercial estate development companies, quick to profit by modern city-planning practice, have already begun to develop large areas on well thought-out plans for city dwellers of wealth and even for men of only moderate means. Building and Loan Associations in America have made possible the acquisition and erection of modest individual homes by workingmen. These associations, co-operative in their nature, require a fixed small monthly payment toward share capital. Members are permitted to borrow on mortgage security up to the amount of the ultimate value of their shares, sums ordinarily ranging from \$200 to \$5000. There are today more than 5700 such associations in the United States, counting more than 2,000,000 members and playing an important part in the production of small private homes.¹ The poorer working-man in American suburbs is still usually provided for only by the two- or three-tenement house or by the converted single house.

CITY PLANNING

Housing laws in America as yet do not usually restrict the types of building to be erected on suburban land. Hence the evils of congested urban districts are frequently, and quite unnecessarily, repeated. Ugly and inflammable tenement houses are sometimes built; crowding and sunlessness are not unknown in newly built regions. Lack of regulation results in the inter-spersion of tenements among private houses, in widely varying distances between houses and street, in the juxtaposition of buildings of discordant colors and architecture. German cities

¹ Proceedings of the 18th annual meeting of the U. S. League of Local Building and Loan Associations, Charlotte, N. C., 1910.

have avoided this needless public error by the enactments of official city plans which provide not only for broad direct traffic ways, circumferential boulevards and parks, but equally for picturesque and retired residence streets, segregated factory areas, and open building. Düsseldorf is, for example, districted into nine main zones; within the first of which, the old or central city, tenement houses may ordinarily be built four stories (20 metres) high and contiguous — covering from one-half to two-thirds of the lot. Outside of this inner area buildings are further restricted in height and in the amount of lot which they may cover. Thus in zone II, which comprises the outer areas of the central city, buildings may not be over three stories (16 metres) in height nor cover more than one-third to one-half of the lot. In the suburban quarters building is still more narrowly restricted and a minimum distance between houses is specified. Subdivisions of zones are provided wherever circumstances demand. By means of the narrow localization of factories and by the zone system German cities guarantee that many of the evils of urban congestion shall not be repeated upon suburban lands.

SUBURBAN HOUSING BY MUNICIPALITIES

Municipal provision for proper urban development has been further extended in progressive German cities to the actual purchase of suburbs. Several German municipalities have thus acquired much of the land on which their growing population will dwell. Sometimes portions of this outer territory are resold by the city, after improvements have been made, at a price greatly in excess of the original purchase price. Thus, Ulm purchased between 1891 and 1909 over 1208 acres of land for \$1,390,000 and resold 404 acres under restriction paramount to public ownership for \$1,633,000, netting the city \$243,000 and 804 acres of land for its venture. This was done on the theory that the increase of land values is socially created and should fill the coffers of the city, not of the speculator. As a result of its foresight Ulm enjoys an exceptionally low tax rate and yet owns or controls nearly all of the outlying lands on which her future population will dwell.

A more radical practice, especially noteworthy in London, England, and Ulm, Germany, is the erection of suburban dwellings

by municipal governments. London in 1900, after having spent more than \$585,000 on urban tenements, undertook to build a tract of 38½ acres with suburban cottages. This estate, known as the Totterdown Fields Estate, proved so successful that since this date the London County Council has laid special stress on suburban building. Amendments to the Housing of the Working Classes Act of 1890 have made it possible for any British city to purchase lands outside its bounds and to erect dwellings, either to house slum population displaced by urban improvement measures, or any of the rest of its working population. London has already bought four estates comprising 340 acres of suburban land, on which it had built up to March 1909, 1335 cottages, offering desirable homes at moderate rents for 10,176 persons. This plan is recognized by housing experts to be better than city tenement building for the tenant, because he is provided with an environment more constructive of body and morals. The city government also gains, not only in the betterment of its population, but in finances, because the cost of land is vastly lower in suburbs than in cities, and the construction of multiple cottages, per room, is found to be cheaper than fireproof tenement construction. Suburban housing has been carried on by London with less actual financial deficit than usually characterizes municipal housing ventures. In fact, by carefully placing a few cottages of comparatively higher rent among the cheaper cottages, suburban estates are made to pay a profit upon the whole investment.

The city of Ulm, Germany, has since 1894 built 175 houses for workmen. The earlier houses were cottage flats built to rent. Since 1904, 72 cottages have been built by the city to sell to single families. These cottages cost each, with land, from \$1700 to \$1900. Purchasers are required to pay 10 per cent down and a minimum of from \$74 to \$80 a year to cover interest at 3 per cent and less than 2 per cent amortisation. The city retains the right to buy back the houses within 100 years, provided the buyer does not pay interest, or desires to sublet or to sell.

STATE HOUSING

Dwellings have been erected for workmen by State Governments, especially in Germany and New Zealand. In Germany such dwellings are for governmental employees only, in railway,

post office, or other service. In New Zealand, however, the Department of Labor, authorized by the Workers' Dwellings Acts of 1905 and 1908, had built 126 cottages up to the summer of 1909. These cottages are built chiefly of wood, surrounded by garden space, and are usually of five rooms each, renting at a gross weekly rate, including insurance and taxes, of from \$2.50 to \$4.50.¹ A scheme is under consideration to permit tenants to acquire ownership of their houses by payment of a somewhat larger weekly rental, as is now the practice in Ulm.

CO-PARTNERSHIP GARDEN SUBURBS

The erection of large model suburban estates of inexpensive dwellings has been successfully undertaken in England by co-operative groups of workingmen. Co-operative housing began with local consumers' associations of the Rochdale system in the incidental erection of dwellings to rent or sell on easy instalments to members. At the end of the year 1909, the workingmen's co-operative associations of Great Britain owned over \$38,800,000 of house property.² Much more has been sold to members. Out of this preliminary co-operative experience, and a variety of experiments in co-operative building and banking, grew in 1901 the Ealing Tenants Ltd., an incorporated association of workingmen, formed exclusively for the purpose of developing a large suburban estate. Members agreed to subscribe to a minimum ultimate share holding of \$245 (£50), payable in instalments. All tenants in the houses were to be shareholders and yet were to pay the current rents for their cottages. The estate was thus owned collectively by the men who dwelt there, all benefitting by the unearned increment of the land created by usage and improvement, and in the business success of the society which as common landlord built substantial houses and kept them full of interested tenants. The earnings of the estate after proper deduction for fixed interest on stock and loans, for depreciation, repair and improvements, and for reserve, were divided among tenant members in proportion to rents paid, but were allotted

¹ New Zealand, Minister of Labour, report on Workers' Dwellings, 1909.

² Coöperative Union, 42d. annual coöperative Congress, Plymouth 1910, p. 632.

in stock, not in coin, until each tenant owned the value of his house in shares. The private ownership of the houses is not granted. The Ealing Tenants Ltd. was the precursor of the present co-partnership housing movement which, under the leadership of the Co-partnership Tenants Housing Council, is today doing more probably than any other democratic form of private endeavor to popularize suburban living and the deliberate planning of large suburbs in a rational and artistic manner. The local associations are affiliated in the Co-partnership Tenants Ltd. of London, the purpose of which is to give advice to societies as to the best methods of buying and building estates, to raise money for societies which need temporary loans, to purchase building materials for societies in bulk at low prices. In 1910 fourteen local co-partnership tenants societies were affiliated with the London association. Jointly they possessed 652 acres of land, on the purchase and development of which \$3,870,000 has already been spent. Large reservations on each estate are made for parks and public buildings. The estimated number of houses to be completed on the fourteen estates is 6595.¹

INDUSTRIAL DECENTRALIZATION

Permanent cures of urban congestion and its attendant evils comprise, not only the programmes of providing proper residences in city and suburb, but also the programme of removal or deflection of population from cities. Chief among the causes of the rush to cities have been the commercial, industrial, and social advantages of central location. Commerce has largely created the city and must for efficiency remain centralized. Industries have sought the city because of the available labor supply and near market. There is, however, a tendency for certain sorts of manufactures to leave the city for suburb, town, or village, to purchase land and labor at lower cost, to enjoy lower rents and taxes, and in some instances to secure better transportation service for freight by means of spur tracks to the factory.

FACTORY VILLAGES

This countermigration of industry has been assisted or stimulated by practical reformers and far-sighted business men, who

¹ International Coöperative Alliance, Bulletin, March 11, 1911, p. 87.

see in the "model factory village" not only improved health and character, but the increased efficiency of the workingman. Effort is often made in such communities to parallel the social advantages of the city with constructive recreation — libraries, gymnasiums, baths, educational classes, dramatics, athletic contests, etc. There are many notable instances in every civilized country of such industrial communities, built and operated by employers of labor. In Germany the Krupp Works at Essen comprise many villages and over 30,000 inhabitants housed in tenements, lodging houses, and cottages built by the firm. In England, at Port Sunlight, near Liverpool, the employees of the soap factories of Lever Brothers are housed in rarely artistic multiple cottages surrounded by well-kept lawns and gardens — but at a loss to the employer, who discounts the expenditure as legitimate "prosperity sharing." At Bournville, near Birmingham, houses were so constructed for the employees of Cadbury Bros., chocolate manufacturers, as to insure a profit of 4 per cent on the investment to the employer. This village, and that of Earswick near York, have been made over by their founders to the British Government to be operated by the Charities Commissioners.

In America industrial corporations have often found it advisable to erect dwellings for their employees. In factory towns, as Lowell for example, tenement houses, multiple cottages, and "corporation boarding houses" have been built in large numbers in past years. The tendency is now for such houses in large industrial cities to be sold to speculators, who by maintaining less satisfactory conditions and requiring higher rents can secure a fair profit. In the smaller factory communities of America, cottages in single and multiple form are still being built by firms for their employees. The Plymouth Cordage Company, of North Plymouth, Massachusetts, the N. O. Nelson Mfg. Company of Edwardsville, Illinois, the Maryland Steel Company of Sparrow's Point, Maryland, the Colorado Fuel and Iron Company, which maintains several crude but sanitary mining villages in Colorado, offer noteworthy instances of this practice.

THE GARDEN CITY MOVEMENT

The building of industrial villages has been somewhat limited by certain attendant difficulties. Unless operated with rare tact it involves social and moral dangers of paternalism on the part of the employer, and of subserviency on the part of the employee. These difficulties have been obviated in an industrial community known as Garden City in Letchworth, England. Garden City, which was founded in 1903, is a community largely owned co-operatively by its citizens, a fair percentage of whom possess at least one \$25 share of stock in the city. Dividends on shares are restricted to 5 per cent, all further earnings being devoted to improvements. The land which is 3818 acres in extent is permanently common property and is leased to individuals, or to co-operative tenants' societies, under restrictions as to type and distance of cottages. Manufacturers are invited to lease land of this co-operative community and establish their plants under conditions democratic as well as healthful. The factories which in 1909 were nineteen in number are placed behind a hill and are not visible from the residential section of the city. The factory quarter is, however, well served by railroad facilities. Reservations, 2500 acres of land as a permanent agricultural belt to supply the city with fresh produce, and smaller sections for parks, gardens, woods, and general public purposes, were made at the outset. The ultimate population is restricted to 35,000, or a maximum of about fifty persons to the acre in the residential quarter. The Garden City plan thus aims, not only to reduce the congestion of existing cities by withdrawing their factory population, but aims to construct cities of ideal plan in which congestion is perpetually prevented. The public costs are met out of the ground rents, and the constantly growing unearned increment of the land. Thus co-operatively an industrial city is founded without congestion, land speculation or paternalism, a city in which natural living, economic well-being, and democracy apparently work consistently together.

As yet the complete programme of the British Garden City has not been imitated elsewhere in its entirety, since the demand for new cities is necessarily small. Its social principles, democratic co-operation and common ownership of the land, and its tech-

nical principles, town planning and cheap sanitary housing, have however been successfully copied. Garden City Associations have been formed in Germany and France for purposes of propaganda. They have resulted already in the increased popularization of suburban town planning principles, and in the building of new co-operative suburbs and private industrial communities.

THE HOUSING PROBLEM IN AMERICA

The agencies engaged in the erection of improved houses in America are all of private nature. Co-operative and public erection of dwellings is scarcely known in this country. Yet speculative builders controlled by a detailed and far-sighted housing law adequately enforced, real estate and land improvement companies catering to an intelligent demand usually on the part of the moderately well-to-do renter or buyer, philanthropic individuals or societies building "model" dwellings, and employers of labor removing their plants from city to suburb or country in order to provide for the welfare and efficiency of their employees, contribute to the relief of congestion and the improvement of housing conditions. Aside from the accomplishment of these agencies, and of housing legislation, public inspection, and sanitary improvement, America has contributed little to the solution of the housing problem.

Of late, however, there has been a marked awakening on the part of American cities to the seriousness of housing conditions. The recent popular exhibits of tuberculosis, congestion of population, child-welfare, housing and city planning, managed by careful propagandists and attended by hundreds of thousands of people, are serving to create a public opinion ready to back fundamental measures. The public appointment of health and housing boards, or of city planning and transit commissions, is evidence of recognized public responsibility. The serious part that speculation in land values plays in the creation or aggravation of the housing problem is already recognized by many. The levy of a tax on land values which shall be double that on improvements, and the municipalization or nationalization of land are beginning to be recognized as important among preventive measures.

EXPERIMENTS IN CHEAP CONSTRUCTION

On the other hand, it is recognized that cheaper modes of house construction must be invented if families of minimum income are to be housed satisfactorily at rents within their means. The careful scientific experiments in cheap house construction by the Russell Sage Foundation, Thomas Edison, Milton Dana Morrill, and others, indicate appreciation of the fact that the provision of hygienic and artistic homes even for the poorest must be at a rent, including cost of carfare for suburban dwellers, no higher than these families now pay for slum accommodation, and yet, if built by private enterprise, must pay the landlord the current net profit on capital.

The more successful experiments so far conducted have taken the form of the standardization and machine manufacture of houses. Ready-made modern houses of modest type have been sold for many years by commercial companies in the form of lumber, fitted piece to piece. This method has been elaborated during the past two years by Grosvenor Atterbury under the patronage of the Russell Sage Foundation. Mr. Atterbury has proved that the process of standardization may be enlarged to the point of manufacturing at once a whole floor, staircase, or house-wall of concrete, thus making it possible to assemble and build a house with fixtures complete in four days' time. The resultant house may be hygienic, fireproof, pleasing of design, and if made in sufficient quantities, inexpensive of construction. The Russell Sage Foundation plans to conduct similar experiments in the construction of tenement houses.

The experiments of Milton Dana Morrill have been concerned with the making of portable standard steel molds, which may be quickly set up, filled with cement, and removed, leaving a "poured" house, completely constructed. Several settlements of these houses, of from four to six rooms, have been built. The cottages of picturesque design are planned to sell in quantity with land for from \$1000 to \$3000 each. The increasing success of experiments in cheap construction, especially if accompanied by restriction of speculation in land and by improved and cheapened transit, progressively tend to render the ownership of a desirable suburban home within the reach of every family.

DIVERSITY IN REMEDIES

Remedies for housing conditions necessarily vary from place to place. Municipal housing is safer in Germany where government is conducted by experts than in America where short terms, graft, and incompetency are prevalent. Co-operative housing is more easily practised in England, where experience in the methods of co-operation is current, than in the United States where population is constantly shifting, thrift is less necessary, and the temper and experience of the people is perhaps more individualistic. Private undertakings in the field of housing reform, whether commercial or philanthropic in their character, must vary widely in their nature from city to city, depending upon the local forces at work, the character of the leaders, and the local conditions. The mining camp, the factory village, the Ghetto, the East or West side, necessarily differ both in their problems and in potential remedies; in every case the local question is seriously complicated by the related social facts of immigration, industry, or poverty.

The first necessary action to secure betterment of housing conditions in many American cities is usually improved housing legislation and its enforcement, broadening to programmes for the complete and harmonious planning of the cities and their suburbs. This action may, however, require a preliminary campaign of publicity as to local housing conditions; it may also require a cleaning up of politics. All movements that contribute to the increase of "real wages," whether they consist in inventions that cheapen house construction, the cost of food or transit, or take the form of industrial reform by effective trade agreements, by true profit-sharing, by co-operation, or by rational socialism, contribute also, in a manner more or less direct, to the betterment of housing conditions. Yet interwoven with the whole fabric of improvement of physical environment may be traced the fundamental urgent problem of education of citizen, of landlord, or of tenant, whether in the principles of hygiene or in social considerateness and breadth of vision. At no point, therefore, in housing reform does the cold technique of house construction or of city building displace the enlarging personal influence which genuine philanthropy may exercise.

THE HOUSING EXHIBIT

The purpose of this Housing Exhibit is to place before the student of social problems in compact form the more important aspects of housing conditions and their diverse remedies. It aims, through photographs, plans, maps, charts and tables, to display compactly the best that the practice of housing experts has discovered in the United States and abroad. The data here represented are ordinarily inaccessible to the average student or layman save for infrequent illustrations in books and periodicals.

As the Exhibit is prepared primarily for students, it is in no sense intended to serve as a substitute for thought or for consultation of sources, but aims rather to stimulate deeper and wider study. The descriptions which accompany the photographs are taken as far as possible from the reports or letters of the institutions represented. No conclusions are drawn, nor is any preference intended. The intention is merely by the selection of a few important examples of each type of housing activity to introduce the student of the housing problem with minimum effort to the whole range of the subject. It has been found inadvisable to attempt at this time to cover the related fields of transit improvement, land taxation, or family budgets. Attention has been concentrated exclusively upon private and public efforts at house construction and control.

CATALOGUE OF EXHIBITS

I. HOUSING CONDITIONS

Europe. Maps showing comparative density of population in Berlin, Vienna, London, Paris.

France.

Marseilles. Tenement streets.

Mentone. " "

Lyons. " "

Paris. " "

Germany. Charts showing incomes and rents in German cities.

Augsburg. Tenement streets.

Berlin. Maps of density of population and of traffic.

Essen. Smoke nuisance in Ruhr coal district.

Great Britain. Urban housing and overcrowding, 1891-1901.

Birmingham. "Bye-law roads"; obstructive buildings; unsanitary areas.

Liverpool. Alleys; tenements; unsanitary areas.

London. Tenement streets; maps of density of population and of traffic.

Manchester. Alleys; streets; yards.

Glasgow. Tenements.

Italy.

Genoa. Tenement streets.

Naples. " "

Rome. " "

Venice. " "

Switzerland.

Zermatt. "Zum See," mountain village.

United States. Charts compiled by the United States Bureau of Labor showing budgets of 25,440 families; per cent of families having lodgers; average expenditure for rent; average number of rooms per family and per individual; per cent of families owning homes; classified in each instance by geographical divisions and by race.

District of Columbia. Washington. Negro shacks and old frame houses.

Illinois. Chicago. Tenement districts; overcrowded lodging houses of Bulgarians and Servians; converted houses.

Kentucky. Louisville. Old houses and out-buildings; dark rooms; defective drainage.

United States (*continued*).

Massachusetts.

Boston. Maps showing distribution of population.

Model of Prince Street tenement block.

Model of Poplar street tenement block.

Schedules used by "Boston 1915" in the housing investigation of 1910.

Tenements; alleys; dark rooms; obstructive buildings; yards.

Cambridge. Wooden tenements; converted dwellings; delapidation.

Lowell. Corporation tenements; private tenements; crowded frame dwellings of French, Greek, and Polish districts.

New York. Cannery settlements and construction camps. Room congestion.

Buffalo. Tenements.

New York City. Tenements; courts; yards; etc. — especially showing defective fire-escapes; littered cellars and air-shafts; school sinks; defective water-closets.

Pennsylvania.

Braddock. Yard.

Homestead. Frame dwellings; streets; yards.

McKeesport. Court.

Philadelphia. Delapidated houses purchased by the Octavia Hill Association; yard hydrants.

Pittsburgh. Tenements; converted houses; streets; yards.

Wisconsin. Milwaukee. Overcrowded converted houses; basement dwellings.

Further photographs of housing conditions are included in the "Settlement Exhibit" of the Social Museum. Special attention may be called to collections representing neighborhood conditions prepared by the "Chicago Commons," "Francis E. Clark Settlement," and "South Halsted Street Institutional Church" of Chicago, Illinois; the "Social Settlement" of Lewiston and Auburn, Me.; the "Church Settlement" of Danbury, N. H. (showing lumber camps and rural housing); the "Children's Aid Society," and "Elizabeth Peabody House" of Boston; the "Greenwich House," of New York City; the "Starr Centre Association" of Philadelphia and the "Kingsley House" of Pittsburgh, Penn.

II. HOUSING LEGISLATION AND ITS ENFORCEMENT

Laws.

Great Britain. Birmingham. Building types under the Bye-laws.

United States. Tabular charts of State and Local tenement house legislation.

New York.

New York City. Evolution of the "Dumb-bell" tenement. Prize plan of 1900.

Laws. New York City (*continued*).

Maps showing location of "new law" tenement houses.
 "New Law" tenement house plans, with photographs of courts, yards, fire-escapes as now required.

Public Inspection and Repair.

Great Britain.

Birmingham. Repair of unsanitary dwellings; demolition of obstructive buildings.

United States.

Massachusetts.

Boston. Work of Board of Health: clearance of littered alleys and yards; removal of obstructive buildings.

Lowell. Buildings occupied by Syrians, ordered vacated by Board of Health.

New York. New York City. Charts showing progressive improvement in the "Lung block," 1903-08.

Slum Clearance.

Great Britain.

Birmingham. Milk Street area.

Liverpool. Adlington Street, Hornby Street, and Bevington Street areas.

London. "London County Council": Boundary St. Area.

Deptford: site of present Carrington House and Sylva Cottages.

Ireland. Belfast "Improvement Schemes."

United States.

New York. New York City. Mulberry Bend.

III. IMPROVED HOUSING

PRIVATE AND PHILANTHROPIC:—

Tenements.

Belgium.

Brussels. "Société anonyme des habitations à bon marché."

France.

Paris. "Société civile: groupe des maisons ouvrières."

"Société des habitations econ. du departement de la Seine."

"Société philanthropique."

"Fondation Rothschild."

Germany.

Düsseldorf. "Aders'sche Wohnungsstiftung."

Frankfurt *a.M.* "Aktienbaugesellschaft für kleine Wohnungen."

"Gemeinnützige Baugesellschaft."

Heerdt. "Gemeinnütziger Bauverein."

Mulhouse. "Fondation Lalancé."

Tenements (continued).

Great Britain.

London. Walworth Estate.

Italy.

Milan. Map showing location of improved dwellings.

United States.

District of Columbia.

Washington. "Sanitary Improvement Co."

New York.

Brooklyn. "Riverside Buildings." "Tower Buildings."

New York City. "City and Suburban Homes Co."

"Model Fire-Proof Tenement Co."

C. F. Bishop tenement house, 1902.

S. K. de Forest New Law tenement, 1905.

The Misses Stone New Law tenement,
1905.

"Phipps House," Nos. 1 and 2.

Mills model tenement house, Sullivan
Street.**Lodging Houses.**

Austria. Vienna. "Kaiser Franz Joseph I. Jubiläumsstiftung."

France.

Paris. Société Philanthropique: "Maison Marjolin."

"Fondation Jacques Stern."

Great Britain. London. "Rowton Houses."

United States.

New York. New York City. "Mills Hotel," Nos. 1, 2 and 3.

Cottages.

France.

Montpellier. "Société de construction."

Passy-Auteuil. "Société des habitations ouvrières."

Germany.

Bielefeld. Improved workmen's dwellings.

Düsseldorf. "Aders'sche Wohnungstiftung."

Great Britain.

Esher. Esher Park garden suburb.

Glyn Cory. Garden village.

Hampstead. Garden Suburb Development Co.

Knebworth. Garden village.

Romford. Garden suburb (Gidea Park).

United States.

New York. New York City. "City & Suburban Homes Co.":
Homewood, L. I."Sage Foundation Homes Co.":
Forest Hills Gardens, L. I.

INDUSTRIAL:—

Tenements.

France. Guise. Familistère de Guise.

Germany.

Essen. "Friedr. Krupp Aktiengesellschaft."

Mulhouse. "Fondation Lalance": L'Union Home.

Wilhelmsburg. "Hamburg-American Line."

Lodging Houses.

Germany. Essen. "Friedr. Krupp Aktiengesellschaft."

United States.

Illinois. Edwardsville. "N. O. Nelson Manufacturing Co."

Massachusetts. Lowell. "Shaw Hosiery Co.": boarding house for women.

Cottages.

France. Dourges. "Société des mines de Dourges."

Germany.

Essen. "Friedr. Krupp Aktiengesellschaft."

Mulhouse. "Société industrielle."

Reutlingen. "Gmindersdorf."

Great Britain.

Bournville. "Cadbury Bros."

Earswick. "Rowntree & Company."

Port Sunlight. "Lever Bros."

Woodlands. "Brodsworth Main Colliery Co."

United States.

Colorado. Pueblo. "Colorado Fuel & Iron Co."

Illinois. Edwardsville. "N. O. Nelson Manufacturing Co."

Maine. Cumberland Mills. "S. D. Warren & Co."

Maryland. Sparrow's Point. "Maryland Steel Company."

Massachusetts.

North Billerica. "Talbot Mills."

Hopedale. "The Draper Company."

Ludlow. "Ludlow Manufacturing Association."

North Plymouth. "Plymouth Cordage Company."

New York. Coldspring. "J. B. & J. M. Cornell Company."

Pennsylvania.

Philadelphia. "John B. Stetson Company."

Wilmerding. "Westinghouse Air Brake Company."

Rhode Island. Peacedale. "Peacedale Manufacturing Co."

CO-OPERATIVE:—

Tenements.

Germany.

Berlin. "Beamten-Wohnungsverein".

"Bau-und Sparverein."

Dresden. "Spar-und Bauverein."

Frankfort *a.M.* "Volks-Bau-und Sparverein."

Hanover. "Heimstättenbaugenossenschaft."

Lodging Houses.

Italy. Milan. "Societa Co-operativa Alberghi Popolari."

Cottages.

Germany. Hellerau. Garden Suburb.

Great Britain.

"Co-partnership Tenants, Ltd."

Birmingham. "Harborne Tenants, Ltd."

Brentham. "Ealing Tenants Ltd."

Hampstead. "Hampstead Tenants, Ltd."

Hereford. "Co-operative Housing, Ltd."

Letchworth. "Garden City Tenants, Ltd."

Manchester. "Manchester Tenants, Ltd."

Warrington. "Warrington Tenants, Ltd."

Wolverhampton. "Fallings Park Garden Suburb Tenants, Ltd."

MUNICIPAL:—**Tenements.**

Belgium. Brussels. "Commune de Schaerbeek."

Germany.

Düsseldorf. Scheurenstrasse group.

Nuremberg. Early municipal housing.

Ulm. Untere Bleiche group.

Great Britain.

Liverpool. Bevington Street Area.

Burlington Street Area; Hornby Street Area.

London. "London County Council": Boundary Street Area; Bourne Estate; Millbank Estate.

Manchester. High School Yard and Oldham Road.

Glasgow. Howard Street, Winning Row and Kennyhill tenements.

Italy. Venice. Tenement groups; S. Leonardo, ai Gesuite, S. Giobbe, S. Anna, S. Rocco, Quintavalle, Corte Colonne, Isola della Giudecca, Malamocco.

Lodging Houses.

Great Britain. London. "Carrington House."

Cottages.

Belgium. Brussels. "Commune de Schaerbeek."

Germany. Ulm. Römerstrasse and Beim Kessel groups.

Great Britain.

Birmingham. Cottage flats (Milk Street) and cottages.

London. "London County Council": Deptford, Sylva cottages; Norbury Estate; Portpool Lane Estate; Totterdown Fields Estate; White Hart Lane Estate.

Sheffield. "Exhibition Cottages."

Ireland. Belfast. Cottages erected under Improvement Act.

Switzerland. Berne. Wylerfeld group.

STATE:—

Cottages.

- Germany. Munich. Improved dwellings for Bavarian R. R. employees.
- New Zealand.
 - Christchurch. Sydenham, Workmen's cottages erected by the Department of Labour.
 - Wellington. Petone and Coromandel Street, Workmen's cottages erected by the Department of Labour.

IV. EXPERIMENTS IN CONSTRUCTION

Cheap and Sanitary Tenements.

- Belgium. Plans published by the "Ministère de l'industrie et du travail."
- France. Paris. "Fondation Rothschild."
- United States.
 - New York City.
 - Study of tenement houses with minimum living conditions adapted from Mons. A. A. Rey.
 - Prize plan of 1900.
 - "New Law" tenement house plans.

Cheap Cottages.

- Belgium. Plans published by the "Ministere de l'industrie et du travail."
- Great Britain.
 - Letchworth. Garden city, "Exhibition cottages."
 - Sheffield. "Exhibition cottages."
- New Zealand.
 - Wellington. Department of Labor: study of comparative cost of wooden and concrete cottages.
- United States.
 - Poured cement houses, Milton Dana Morrill.
 - Ready made concrete houses, Russell Sage Foundation.

V. CITY PLANNING

City Plans.

- Europe. Comparative park reservations of Berlin, London, Paris, Vienna.
- Austria. Vienna. Plans of city — especially showing building zones, arrangement of streets, boulevards, and park reservations.
- Germany.
 - Darmstadt. Plan of city; building zones.
 - Dresden. Plan of city, 1910; building zones.
 - Düsseldorf. Plan of city; building zones, redistribution of lots.

City Plans. Germany (*continued*).

Frankfurt *a.M.* Plans of city — 1907 and 1910; building zones, redistribution of lots, widening of old streets.

Kempen. Plan of city, 1910.

Munich. Plan of city; building zones.

Nuremberg. Plan of city.

Ulm. Plans of city; building zones, cross-sections of streets.

Wiesbaden. Plan of city.

Great Britain. Liverpool. Maps showing location of parks and municipal dwellings.

Ireland. Belfast. Street widening and street extension.

Hawaii. Honolulu. Detail.

United States.

California. Los Angeles. Details.

Iowa. Cedar Rapids. Proposed street and parkway extensions.

Massachusetts. Boston. Maps of congestion of population; of metropolitan parks system.

New York. Watertown. Town plan, detail.

New York City. Maps showing street plan and location of new-law tenements.

Italy.

Milan. Maps of city.

Venice. Map showing location of municipal tenements.

Suburban Plans.**Germany.**

Cologne. Municipal plan for suburban development, 1910.

Danzig-Neuschottland. Municipal plan for suburban development.

Darmstadt. Garden suburb: "Hohler Weg."

Dresden. Building plans for Flur Gruna and Pirnaische Vorstadt.

Frankfurt *a.M.* Details.

Hellerau. Garden suburb.

Munich-Perlach. Garden suburbs.

Marienbergr. Municipal plan for suburban development.

Nuremberg. Garden suburb.

Rostock. Municipal plan for suburban development.

Ulm. Plan of Römerstrasse and Galgenberg quarters.

Great Britain.

Birmingham. Harborne Garden suburb.

Brentham. Ealing Garden suburb.

Esher. Esher Park Garden suburb.

Finchley. Brent Garden village.

Glyn Cory. Garden village.

Hampstead. Garden suburb.

Suburban Plans. Great Britain (*continued*).

Hereford. Garden suburb.
 Knebworth. Garden village.
 Letchworth. Garden city.
 Liverpool. Garden suburb.
 London. "London County Council":
 Norbury Estate.
 Portpool Lane Estate.
 Totterdown Fields Estate.
 White Hart Lane Estate.
 Manchester. Burnage Lane Estate.
 Romford. Garden suburb (Gidea Park).
 Warrington. Garden suburbs.
 Wolverhampton. Fallings Park Estate.

Switzerland. Berne. "Wylerfeld."

Industrial Village Plans.

France, Dourges. "Société des mines de Dourges": Garden village.
 Germany.

Essen. "Friedr. Krupp Aktiengesellschaft": Colonies.
 Hoechst a.M. "Meister Lucius & Brüning."
 Reutlingen. "Gmindersdorf."

Great Britain.

Bournville. "Cadbury Bros.": Garden suburb.
 Earswick. "Rowntree & Company": Garden village.
 Port Sunlight. "Lever Bros.": Garden village.
 Woodlands. "Brodsworth Main Colliery Co.": Garden village.

United States.

Massachusetts. North Billerica. "Talbot Mills."

A SELECTED LIST OF BOOKS AND ARTICLES ON HOUSING AND CITY PLANNING

1. GENERAL

The literature on housing conditions is to be found largely in general studies of social conditions — as, for example¹: —

BOOTH, CHARLES. *Life and Labour of the People in London.*

BYINGTON, MARGARET F. *Homestead, the households of a mill-town.*

HOWARD, E. G., and WILSON, M. *West Ham.*

WOODS, ROBERT A., editor. *The city wilderness. Americans in process.*

Within the last decade valuable studies of local housing conditions have been made at Birmingham, Sheffield, Manchester and other English cities, and in Philadelphia, 1904 (Octavia Hill Association); Baltimore, 1907 (Federated Charities); Washington, 1908 (President's Homes Commission); Milwaukee, 1905 (Wisconsin Bureau of Labor); St. Louis, 1908 (Civic League); Louisville, 1909 (Tenement House Commission); and other American cities. In New York City the permanent Tenement House Department produces reports of value. Important collections of articles on housing in various American cities have been published in 1902 in the *Annals of the American Academy of Political and Social Science*, and on October 6, 1906, in *Charities and the Commons*. Material is to be found currently in *The American City*, 93 Nassau Street, New York City, and in *The Survey*, 105 E. 22 Street, New York City. Special attention may be called to a series of articles in the latter magazine under the title "The housing awakening," beginning in the issue of November 19, 1910.

The general subject of housing is considered at length annually in national and international congresses on housing, city planning, hygiene, and tuberculosis. Reports or descriptive pamphlets are

¹ For further references and comments see: "A Guide to Reading in Social Ethics and Allied Subjects," published by Harvard University, 1910, — especially pp. 35-38 on "Social Investigation," by Dr. Robert F. Foerster.

published by all of the municipalities (e. g. London County Council; Corporations of Liverpool, Glasgow, etc.; Gemeinde Bern; Stadt Ulm; Comune di Venezia) and by the co-operative or philanthropic societies mentioned in the foregoing pages.

ALDEN, PERCY, and HAYWARD, EDWARD E. *Housing*. London: Headley Brothers, 1907, pp. 176.

A concise elementary exposition of the housing problem and remedies with especial reference to English conditions. General program for housing reform in urban and rural districts. Bibliography.

COMMONS, JOHN R. *Standardization of housing investigations*. Boston: Quarterly publications of the American Statistical Association, December, 1908, Vol. XI, pp. 319-326.

A technical table for statistical comparison of housing conditions. Necessarily arbitrary, but suggestive.

CORNES, JAMES. *Modern housing in town and country*. New York: Charles Scribner's Sons, 1905, pp. xviii, 194.

An architectural reference book, abundantly illustrated with photographs and plans of tenements and cottages erected by municipal, co-operative and private enterprise.

DE FOREST, ROBERT W., and VEILLER, LAWRENCE. *The tenement house problem*. 2 vols. New York: The Macmillan Company, 1903, pp. xxxi, 470, 516.

Specific phases of the tenement problem in New York City and State, treated in a series of monographs by competent authors. The most comprehensive study of local housing yet made in America. In large part of purely local interest and in many details not up-to-date because of the marked improvements in legislation largely effected by these writers. Illustrated.

EBERSTADT, DR. RUD. *Handbuch des Wohnungswesens und der Wohnungsfrage*. Jena: Gustav Fischer, 1909, pp. vii, 412.

This volume aims to cover the economic, political, and technical aspects of housing in Germany, and is valuable for reference as to improved housing undertakings by the empire, province, city, employer and by joint-stock and co-operative companies. It treats, in addition to the housing question proper, the land question and the history and practice of town-planning.

FORD, GEORGE BURDETT. *The housing problem*. *Brickbuilder*. Boston: Rogers & Manson, 1909, Vol. XVIII, pp. 26-29, 76-79, 100-104, 144-147, 185-190.

Five articles, covering (I) modes of cheap tenement construction; (II) modes of procuring maximum sunlight and ventilation; (III) desiderata of

tenement housekeeping, including privacy, beauty, etc.; (IV) building laws; and (V) lodging houses. Although technical and written especially for the use of architects, these articles (except IV) present the problem of construction of model tenements in a manner which is new and important for housing specialists. Illustrated.

JÄGER, DR. EUGEN. *Die Wohnungsfrage*. 2 vols. in 1. Berlin: Verlag der Germania, 1902, pp. vii, 352; vii, 322.

The first volume deals with housing conditions and the activity of private agencies for housing reform. The second volume treats at length of the position of the municipality with reference to house construction, land and land taxation, and discusses the imperial housing laws. A valuable contribution to general housing literature, comprehensive as to German issues, but based on statistics already a decade old.

KAISERLICHES STATISTISCHES AMT. *Abteilung für Arbeiterstatistik. Wohnungsfürsorge in deutschen Städten*. Berlin: Carl Heymann's Verlag, 1910. pp. viii, 635.

Contains digest of housing and town planning laws of German provinces and cities (pp. 1-440). Briefer treatment of enforcement of laws, municipal information bureaus for tenants, municipal erection of small dwellings, and public encouragement of the building of improved dwellings through cheap loans, free land, or tax exemption. Useful statistical tables.

NETTLEFOLD, J. S. *Practical housing*. Letchworth: Garden City Press, 1908, pp. xiii, 203.

The housing problem as it exists in English cities. Municipal purchase or control of suburban land and co-partnership as suggested solutions. Quotations from the experience of English cities in administration of the housing acts. Extended reference to German town planning systems. Illustrated.

Ninth International Housing Congress. *Proceedings*. Vienna: IX Wohnungs-Congress, 8 Stubenring, June, 1910.

Valuable collection of monographs on municipal housing, state loans to housing enterprise, tenement *vs.* cottage, methods of cheap construction, and recent progress in improved housing.

SYKES, JOHN F. J., M.D. *Public health and housing*. London: P. S. King & Son, 1901, pp. viii, 216.

"The influence of the dwelling upon health in relation to the changing style of habitation." Suggestive particularly on the matter of construction and usage of houses. Based on British data.

THOMPSON, W. The housing handbook and housing up-to-date. 2 vols. in 1. London: P. S. King & Son, 1907, pp. xvi, 388; xvi, 319.

An elaborate "collection of facts and figures dealing with the practical end of the housing question." Inchoate, statistical, and for the most part of local (British) interest only, yet serviceable for reference especially as to municipal housing, garden cities, and the housing acts of Great Britain. Illustrated. This book is supplemented by an article by the same author on "Housing of the Working Classes" in the Municipal Yearbook of the United Kingdom for 1910, pp. 595-657, London, Edward Lloyd, Ltd., 1910.

2. HOUSING LEGISLATION AND ADMINISTRATION

DEWSNUP, ERNEST RITSON. The housing problem in England. Manchester: University Press, 1907, pp. vii, 327.

A discriminating and largely statistical treatment of housing legislation in England and the present administration of the law, with especial emphasis on the function of the municipality. Local sanitary supervision is urged, municipal ownership discouraged. Bibliography.

MACGREGOR, FORD H. Tenement house legislation, state and local. Madison: Wisconsin Library Commission, Legislative Reference Department, Bulletin No. 19, 1909, pp. 96.

A classified compilation of housing laws enacted by states and large cities of the United States, together with transcripts from the laws of eight European cities. Tabular Charts.

VEILLER, LAWRENCE. Housing reform, a handbook for practical use in American cities. New York: Charities Publication Committee, 1910, pp. xii, 213.

A thoroughly practical handbook. Although largely illustrated from the rather unique problems of New York City, and ignoring or refusing city planning, improvement of transit, and the building of model tenements, as means to housing reform, this book is exceptionally discriminating in its treatment of housing conditions, and offers a vigorous appeal and program for housing legislation and its enforcement.

VEILLER, LAWRENCE. A model tenement house law. New York: Charities Publication Committee, 1910, pp. 142.

"Specific sections cover every essential feature of a model housing law so arranged that by changing a word here or there it can be adopted by any community as a state law or city ordinance."

3. LODGING HOUSES

On the subject of improved lodging houses there will be found chapters in the books cited above, especially in Thompson's "Housing Handbook" and Ford's "Housing Problem," No. 5 (September, 1909). There is considerable pamphlet and periodical literature on experiments of lodging-house building by public enterprise in Glasgow and London, and by private enterprise in Paris, Milan, and New York. Printed reports of all of the lodging-houses mentioned in the Catalogue of the Housing Exhibit are available. The two titles given below are supplementary local studies of unimproved lodging house conditions.

SANBORN, ALVAN FRANCIS. Moody's lodging house and other tenement sketches. Boston: Copeland & Day, 1895, pp. 175.

A somewhat exaggerated but enlightening popular account of selected night lodging houses and tenements of Boston and their inmates. Transcripts from life, in conversational form.

WOLFE, ALBERT BENEDICT. The lodging house problem in Boston. Boston and New York: Houghton, Mifflin Company, 1906, pp. 200.

An able, intensive study of the problem of the "roomers," the nomadic, low-salaried, "single" population in the South End of Boston. A highly specialized social problem considered seriously and in detail. Bibliography.

4. INDUSTRIAL HOUSING

Monographs on the housing activity of specific establishments are frequently available, of which may be mentioned by way of example:—

HARVEY, WILLIAM ALEXANDER. The model village and its cottages — Bournville. London: B. T. Batsford, 1906.

Colorado Fuel and Iron Company. Housing number of *Camp and Plant*. Denver, Colo., April 9, 1904.

Kruppsche Guss-stahlfabrik. Das Arbeiter Wohnhaus. Essen-Ruhr, Germany, 1907.

Literature on employer's housing in general is meager and superficial. The following works are of practical value.

HANGER, G. W. W. Housing of the working people in the United States by employers. *Bulletin of the Bureau of Labor*, No. 54, Department of Commerce and Labor. Washington: Government Printing Office, 1904, pp. 1191-1243.

Serviceable as a collection of photographs and plans of houses erected by each of sixteen manufacturing establishments. Brief descriptions of welfare work carried on by the firms considered.

MEAKIN, BUDGETT. Model factories and villages; ideal conditions of labor and housing. London: T. Fisher Unwin, 1905, pp. 480.

Part II, on "Industrial Housing," pages 349-480 presents an elementary exposition of the housing of workmen by employers, abundantly illustrated with American, British, and European examples.

NAZRO, W. E. C. Housing of employees as a problem of social environment. Reprint from *Textile Manufacturers' Journal* of January 1, 1910, pp. 15.

A compact treatment of the construction and administration of a sanitary and artistic manufacturer's village. Illustrated.

5. GARDEN CITIES AND CO-PARTNERSHIP SUBURBS

The subject of garden cities is touched upon in general works on housing and town planning (see especially, Nettlefold, Thompson, Alden) and is treated currently in the files of *Garden Cities and Town Planning* (Birkbeck Bank Chambers, Holborn, London) and of *Co-partnership* (6 Bloomsbury Square, London). Instructive pamphlet literature may be procured from these same sources.

ABERCROMBIE, P. Modern town planning in England, a comparative review of "Garden City" schemes in England. *Town Planning Review*. Liverpool: University Press, 1911, vol. 1, pp. 18-38, 111-128.

The best available summary of the British "Garden City" and co-partnership housing movements. Illustrated.

HOWARD, EBENEZER. Garden cities of to-morrow. London: Swan, Sonnenschein & Co., Ltd., 1902, pp. 167.

This book, first published as "To-morrow: a peaceful path to real reform," is the literary source of the garden city movement. The solution of the problems of urban congestion and rural depopulation is found by the author in the formation of industrial "garden cities," constructed to combine the advantages of town and country. Illustrated.

SENNETT, A. R. Garden cities in theory and practice. 2 vols. London: Bemrose & Sons, Ltd., 1905, pp. xiv, xi, 1404.

Exceedingly verbose, but contains data of service to specialists. Illustrated.

6. CITY PLANNING

In addition to the chapters on city planning to be found in books on housing, above mentioned, a specialized literature on this subject is rapidly growing. "L'art de batir les villes," by CAMILLO SITTE, of Austria, and "Der Städtebau," by JOSEF STÜBBEN, of Germany, contain a wealth of material not yet entirely appropriated by English and American writers. A monthly journal, *Der Städtebau*, edited by Goecke and Sitte, has been in existence in Germany since 1904. *The Town planning Review*, a quarterly published by the Department of Civic Design of the University of Liverpool, dates from April, 1910. *The American City*, which brought out its first issue in September, 1909; the City Planning number of *Charities and the Commons*, February 1, 1908, and the Proceedings of the Second National Conference on City Planning at Rochester, May, 1910, which contains an excellent brief article by Professor F. L. Olmsted, are useful American sources.

HORSFALL, T. C. The improvement of the dwellings and surroundings of the people: the example of Germany. Manchester: University Press, 1905, pp. vi, 196.

Contains a description of municipal housing and town planning methods in German cities, especially Ulm, Frankfort a. M. and Cologne.

HURD, RICHARD M. Principles of city land values. New York: *The Record and Guide*, 1903, pp. viii, 159.

A keen analysis of the structure of unplanned cities and of the causes of the rise and fall of city land values, based on extended study of American cities. Of practical value as indicating the probable direction of urban growth. Illustrated.

MARSH, BENJAMIN CLARKE. An introduction to city planning, democracy's challenge to the American city. New York: privately printed [address Committee of Congestion of Population], 1909, pp. 158.

This book contains data on the congestion of population in American cities, followed by a chapter on the "Technical Phases of City Planning," by G. B. Ford, a discussion of town planning in various cities of Europe,

and valuable translations from German building codes. In treatment of American conditions, the book is, in the main, of propagandist character, crude, but vigorous and suggestive. Illustrated. Bibliography.

MASSACHUSETTS Commission on Metropolitan Improvements. Public improvements for the metropolitan district. Boston: Wright & Potter Printing Co., 1909, pp. xii, 318.

A good local study of the commercial need of city planning, with reference especially to railroads, docks, and highways. Illustrative maps.

ROBINSON, CHARLES MULFORD. The improvement of towns and cities, or the practical basis of civic aesthetics. Third edition. New York: G. P. Putnam's Sons, 1907, pp. xiii, 313.

ROBINSON, CHARLES MULFORD. Modern civic art. New York: G. P. Putnam's Sons, 1903, pp. iv, 381.

City planning from the standpoint of civic beauty. In the former work, urban problems, such as site, parks, paving, advertisements and the placing of sculpture, are considered in detail. The latter work considers the city as a unit, — its focal points, business and residential sections. Valuable summaries of the varied effort in behalf of city beauty, pleasingly presented.

TRIGGS, H. INIGO. Town planning, past, present, and possible. New York: Charles Scribner's Sons, 1909, pp. xix, 334.

Contains material of use to the discriminating reader.

UNWIN, RAYMOND. Town planning in practice; an introduction to the art of designing cities and suburbs. London: T. Fisher Unwin, 1909, pp. xxi, 416.

The planning of cities considered both historically and with reference to present-day social and aesthetic problems. The book is of especial value to architects, but though lacking in consideration of problems of urban congestion and municipal remedies is full of valuable suggestions for the general reader. Profuse and well-chosen illustrations. Bibliography.

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